SRG-U01

USB I/O Box With Audio, x2 COM, x2 COM/CCtalk, x1 USB, Digital I/O interface

User's Manual

© Copyright 2010. All Rights Reserved

Manual Edition 1.0, September, 2012

This document contains proprietary information protected by copyright. All rights are reserved; no part of this manual may be reproduced, copied, translated or transmitted in any form or by any means without prior written permission of the manufacturer.

The content of this document is intended to be accurate and reliable; the original manufacturer assumes no responsibility for any inaccuracies that may be contained in this manual. The original manufacturer reserves the right to make improvements to the products described in this manual at any time without prior notice.

Trademarks

IBM, EGA, VGA, XT/AT, OS/2 and PS/2 are registered trademarks of International business Machine Corporation

Award is a trademark of Award Software International, Inc

Intel is a trademark of Intel

RTL is a trademark of Realtek

VIA is a trademark of VIA Technologies, Inc

Microsoft, Windows, Windows NT and MS-DOS are either trademarks or registered trademarks of Microsoft Corporation

All other product names mentioned herein are used for identification purpose only and may be trademarks and/or registered trademarks of their respective companies

Limitation of Liability

While reasonable efforts have been made to ensure the accuracy of this document, the manufacturer and distributor assume no liability resulting from errors or omissions in this document, or from the use of the information contained herein.

For more information on SRG-U01 or other AEWIN products, please visit our website http://www.aewin.com.tw.

For technical supports or free catalog, please send your inquiry to info@aewin.com.tw

Revision History

Rev.1.0	Original copy

Table of Content

Chapter 1. General Information 5
1.1 Introducing 5
1.2 Specification 5
1.3 Order Information 7
1.4 Packaging 7
1.5 Precautions 7
1.6 Box System 9
1.7 Board / System Dimension 10
Chapter 2. Connector/Jumper Configuration 11
2.1 Connector/Jumper Location and Definition 11
2.2 Connector and Jumper Setting 14
Appendix : Development Kit (optional) 18

Chapter 1. General Information

1.1 Introducing

SRG-U01, a miscellaneous I/O control box for variety applications, like gaming machine, POS, machine automation …etc. The box with x1 USB 2.0, x1 audio (line-out), x2 COM, x2 COM/CCtalk (by jumper setting), digital I/O. support Windows 7 and Windows Embedded Standard 7.

1.2 Specification

■ Audio	
Audio	x1 Line-out
■ Gaming	
Digital I/O	24 x photo-couple isolated input 24 x 500mA current sink output
■ System I/O	
COM	4 x COM • COM1 support Full RS-232 (external DB9) • COM2 support Full RS-232 (external DB9) • COM3 support Full RS-232 or cctalk (jumper select) • COM4 support Full RS-232 or cctalk (jumper select)
USB	1 x USB2.0, type B, the interface to host 1 x USB2.0, type A.
■ Power Supply	
Voltage	DC 5V/2A power adapter
■ Software	
O/S	Microsoft® Windows® 7/ Windows® Embedded Standard7
■ Mechanical and Environment	
Environmental	Operating Temperature: 0 – 60 ºC (32 ºF – 140 ºF) Storage Temperature: -20 – 85 ºC (-4 ºF – 185 ºF) Relative Humidity: 10-85 % RH, non-condensing
Compliant	FCC/CE Class A; ESD
Dimension	172mm(L) x 105mm(W) x 42mm(H)
■ Applications	

Main Application	Gaming Video slot machines Fruit machines Video lottery terminals Amusement game machines Betting terminal of multiplayer table game or roulette POS station

1.3 Order Information

SRG-U01A	USB I/O Box With Audio, x2 COM, x2 COM/CCtalk, x1 USB, Digital I/O interface
Optional	
DK-SRGU01-01	Development Kit include R217A Gaming I/O testing board

* Note: All specifications are subject to change without prior notice

1.4 Packaging

Please make sure that the following items have been included in the package before installation.

1. SRG-U01 box
2. Quick Installation Guide (Optional)
3. Cables (Optional)
4. CD-ROM that contains the following folders:

(1) Manual

(2) Driver

If any item of above is missing or damaged, please contact your dealer or retailer from whom you purchased the SRG-U01. Keep the box and carton when you probably ship or store SRG-U01 in near future. After you unpack the goods, inspect and make sure the packaging is intact. Do not plug the power adapter to the appliance of SRG-U01 if you already find it appears damaged.

Note: Keep the SRG-U01 in the original packaging until you start installation.

1.5 Precautions

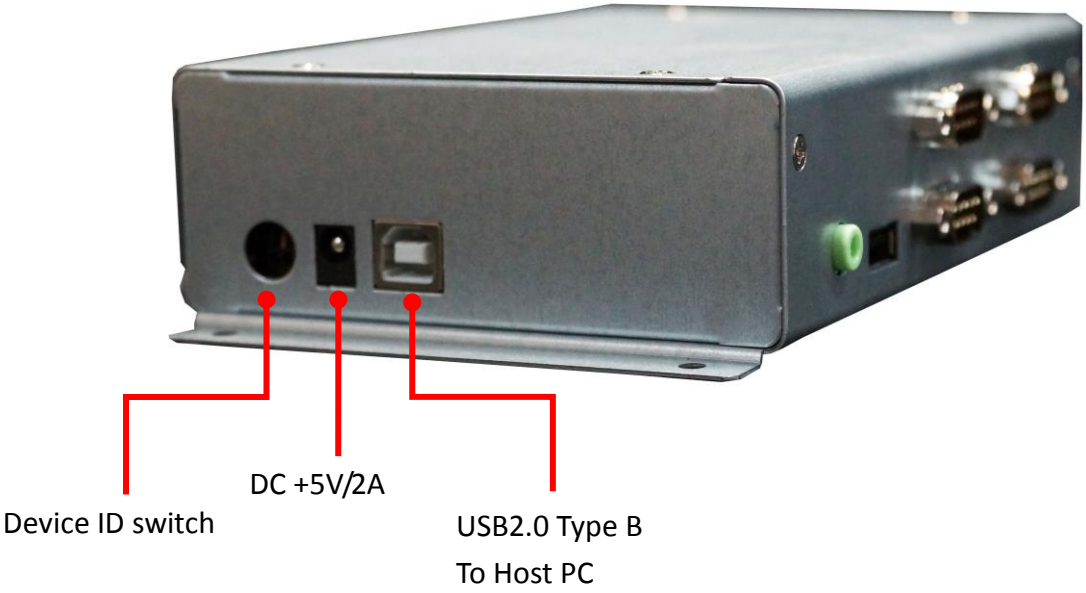
Please make sure you properly ground yourself before handling the SRG-U01 box or other system components. Electrostatic discharge can be easily damage the SRG-U01 box.

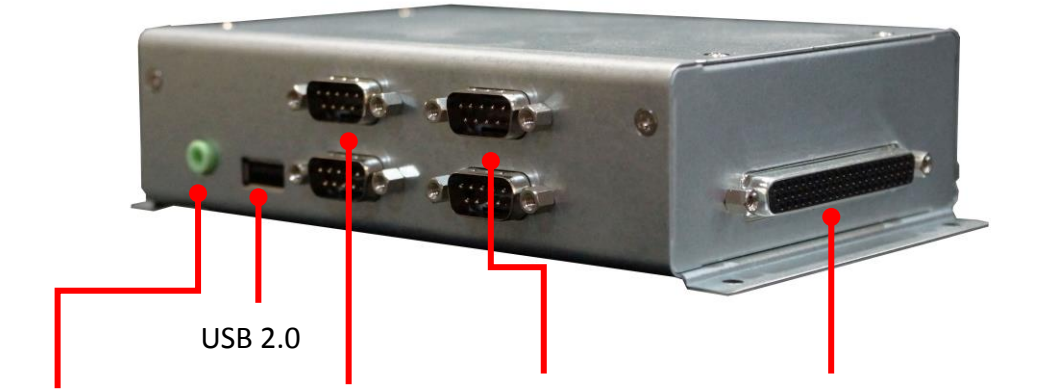
Do not remove the anti-static packing until you are ready to install the SRG-U01 box.

Ground yourself before removing any system component from it protective anti-static packaging. To ground yourself, grasp the expansion slot covers or other unpainted parts of the computer chassis.

Handle the SRG-U01 box by its edges and avoid touching the components on it.

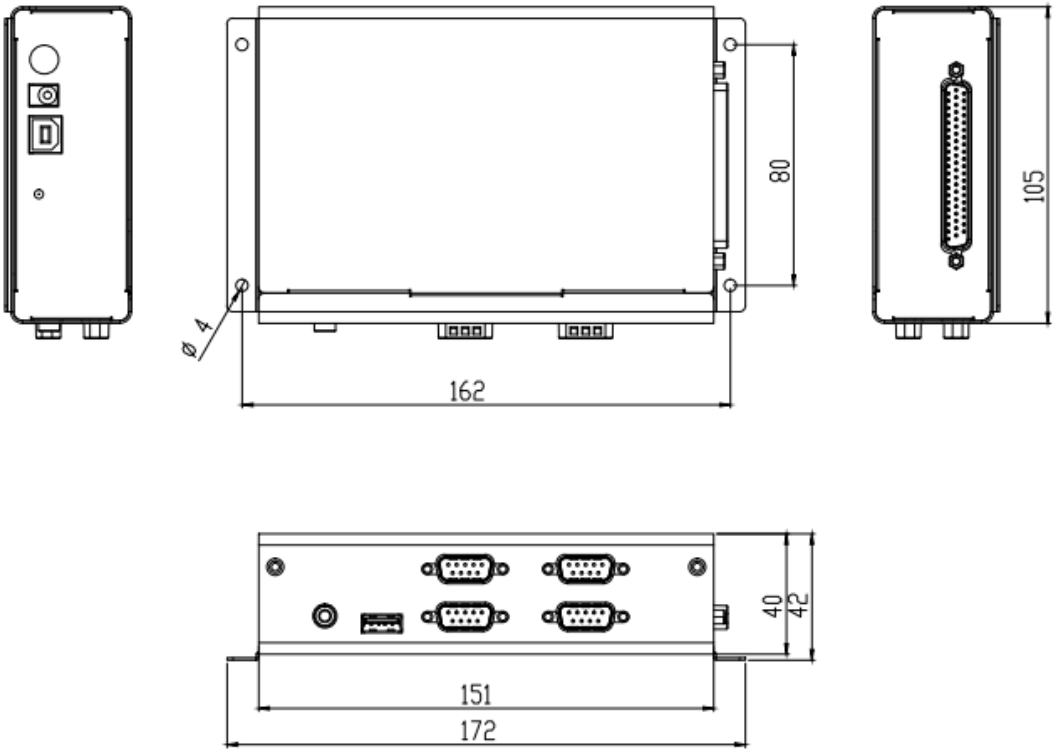
1.6 Box System





1.7 Board / System Dimension

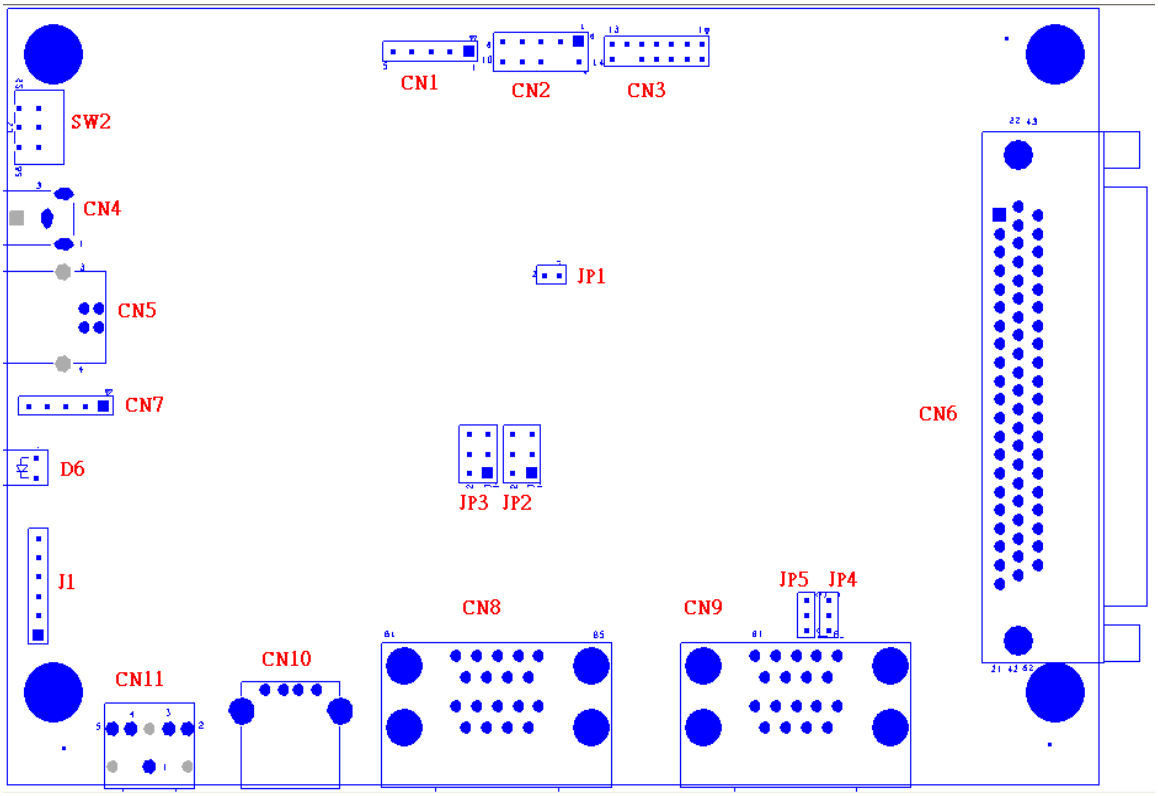
172mm(L) x 105mm(W) x 42mm(H)



Chapter 2. Connector/Jumper Configuration

2.1 Connector/Jumper Location and Definition

Connector:



Connector	Description
CN1	SPI programming connector
CN2	LPC connector
CN3	FPGA programming connector
CN4	+5V DC jack
CN5	USB Type A connector
CN6	GPIO connector
CN7	USB connector (Pin Header)
CN8	COM1/COM2 connector
CN9	COM3/COM4 connector
CN10	USB Type B connector

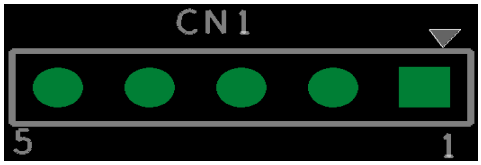
CN11	Audio connector
J1	I2C connector

Jumper:

JP1	3.3V for FBGA pump signal
JP2	RS-232 / CC talk select (COM3)
JP3	RS-232 / CC talk select (COM4)
JP4	CC talk signal / RI signal select (COM3)
JP5	CC talk signal / RI signal select (COM4)
JP1	1-2 On: 3.3V
	1-2 Open: normal
JP2	1-3, 2-4: RS-232
	3-5, 4-6: CC talk
JP3	1-3, 2-4: RS-232
	3-5, 4-6: CC talk
JP4	1-2: RS-232
	2-3: CC talk
JP5	1-2: RS-232
	2-3: CC talk

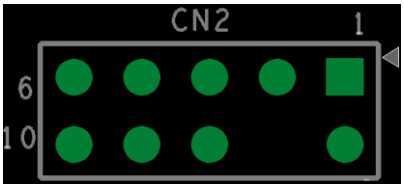
2.2 Connector and Jumper Setting

CN1: SPI programming connector



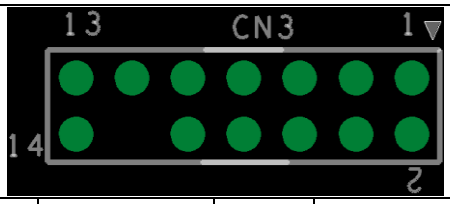
Pin	Define	Pin	Define
1	+5V	2	GND
3	XRES	4	MOSI
5	SCLK		

CN2: LPC connector



Pin	Define	Pin	Define
1	FTCK	2	GND
3	FTDO	4	
5	FTMS	6	VJTAG
7	VPUMP	8	FTRST
9	FTDI	10	GND

CN3 : FPGA programming connector

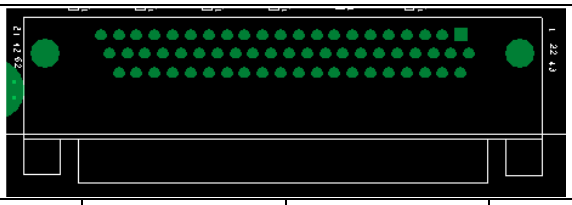


Pin	Define	Pin	Define
1	N/C	2	FPGA_AD0
3	FPGA_AD1	4	FPGA_AD2
5	FPGA_AD3	6	FPGA_FRAME_N
7	FPGA_RST_N	8	N/C
9	FPGA_CLK	10	N/C
11	GND	12	N/C
13	FGPA_IRQ	14	N/C

CN4 : +5V DC jack

CN5: USB Type A connector

CN6: GPIO connector

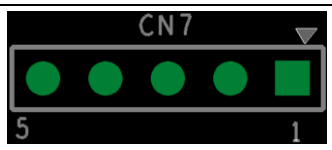


Pin	Define	Pin	Define
1	+5V	2	Ext_5V_IN
3	GND	4	GND
5	Ext_5V_IN	6	GPI1_5V
7	GPI4_5V	8	GPI7_5V
9	GPI10_5V	10	GPI13_5
11	GPI16_5	12	GPI19_5V
13	GPI22_5V	14	GPO1
15	GPO4	16	GPO7
17	GPO10	18	GPO13
19	GPO16	20	GPO19
21	GPO22	22	+5V
23	+3.3V	24	GND
25	GND	26	Ext_5V_IN

27	GPI2_5V	28	GPI5_5V
29	GPI8_5V	30	GPI11_5V
31	GPI14_5	32	GPI17_5
33	GPI20_5V	34	GPI23_5V
35	GPO2	36	GPO5
37	GPO8	38	GPO11
39	GPO14	40	GPO17
41	GPO20	42	GPO23
43	+5V	44	+3.3V
45	GND	46	GND
47	GPI0_5V	48	GPI3_5V
49	GPI6_5V	50	GPI9_5V
51	GPI12_5	52	GPI15_5
53	GPI18_5V	54	GPI21_5V
55	GPO0	56	GPO3
57	GPO6	58	GPO9
59	GPO12	60	GPO15
61	GPO18	62	GPO21

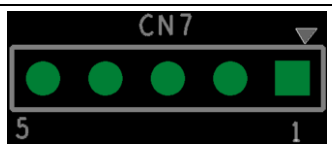
Note : Attention on output, driving load more than 50mA constantly could cause device damaged.

CN7: USB connector (Pin Header)



Pin	Define
1	+5V
2	DMU_R2
3	DPU_R2
4	GND
5	GND

CN8 & CN9: USB pin header

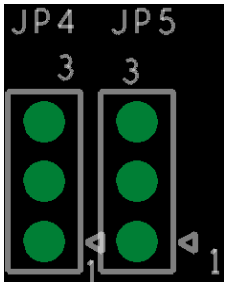


Pin	Define	Pin	Define
1	DCD	2	RXD
3	TXD	4	DTR
5	GND	6	DSR
7	RTS	8	CTS
9	RIA / ccTalK (COM3,4 support ccTalk, by jumper selecting, JP4,5)		

CN10: USB Connector

CN11 : Line-out

JP4 & JP5:COM3, COM4 ccTalk setting



Pin	Define
1	COM
2	Output
3	ccTalk

Appendix : Development Kit (optional)

The SRG-U01 offers R217A Gaming I/O testing board and some cables for development usage.

DK-SRG-U01

Item & Description	Part No.	Qty
Gaming I/O testing board	R217A-01	1
72 pin golden finger cable	46L-G00031-00	1

R217A-01

46L-G00031-00